		Committed Backlog Items	Tasks	Who?	Not Started	In Progress	Completed
PBI #1		**PBI #1 - Generate error messages**	**PBI time: 8hr**	**Alex**		X	
As	an election official using the voting system software	0.5hr	Catch error conditions	Alex			X
I want	the program to provide appropriate error messages if a bad ballot file is passed in	0.5hr	Generate useful error messages	Alex			X
So that	I can fix the file and provide the correctly formatted file	0.5hr	Cleanly resolve error	Alex			X
		4hr	Fuzz via AFL++	Alex			X
Acceptance Criteria	Generate appropriate errors for empty ballot files, files with parse problems	0.5hr	Documentation	Alex			X
Definition of Done	Generate an error if unable to parse input CSV file; accept correctly formatted CSV files; No compilation error; unit tests for each method and agreed amount of system tests pass; correct output	1hr	Write new unit tests	Alex	X		
Effort	Medium (~5-6 hours)	0.1hr	Run new unit tests	Alex	X		
		0.5hr	Write new system tests	Alex	X		
		0.1hr	Run new system tests	Alex	X		
		0.15hr	Write unit test logs	Alex	X		
		0.15hr	Write system test logs	Alex	X		
PBI #2		**PBI #2 - Resolve ties via coin flip**	**PBI time: 3.5hr**	**Alex**		X	
As	an election official using the voting system software	1hr	Add new functionality	Alex			X
I want	Candidates or parties with ties to be resolved via a 50/50 coin flip	0.5hr	Documentation	Alex			X
So that	Ties ae resolved randomly, fairly, and indepdently of other factors	1hr	Write new unit tests	Alex	X		
		0.1hr	Run new unit tests	Alex	X		
Acceptance Criteria	Ties between candidates or between parties can be resolved randomly	0.5hr	Write new system tests	Alex	X		
Definition of Done	Ties between candidates or between parties can be resolved randomly; No compilation error; unit tests for each method and agreed amount of system tests pass; correct output	0.1hr	Run new system tests	Alex	X		
Effort	Small (~2-3 hours)	0.15hr	Write unit test logs	Alex	X		
		0.15hr	Write system test logs	Alex	X		
PBI #3		**PBI #3 - VotingSystem api has one method for elections**	**PBI time: 2.6hr**	**Alex**		X	
As	a developer	0.1hr	Rewrite old calls in Election	Alex			X
I want	to be able to create and run an election, easily. The electables field is not populated unless three additional functions are celled in order	0.5hr	Documentation	Alex			X
So that	The probability of logic errors are reduced and the system is easily extensible.	1hr	Write new unit tests	Alex	X		
		0.1hr	Run new unit tests	Alex	X		
Acceptance Criteria	A new method is added to votingSystem to automatically call processElectables(), countVotes(), and calculateResults().	0.5hr	Write new system tests	Alex			X
Definition of Done	No compilation error; unit tests for each method and agreed amount of system tests pass; correct output	0.1hr	Run new system tests	Alex			X
Effort	Small (~2-3 hours)	0.15hr	Write unit test logs	Alex			X
		0.15hr	Write system test logs	Alex			X
PBI #4		**PBI #4 - Multiple files for the CPL algorithm**	**PBI time: 3.5hr**	**Ashwin, Alex**			
As	an election official	0.25hr	Change CLI functionality to take in multiple files for CPL	Alex	x		
I want	Multiple files to be brought in for a CPL election	0.25hr	Change GUI functionality to take in multiple files for CPL	Alex	x		
So that	they can bring in different files from different balloting locations	1hr	Code functionality for multiple files read	Leo	x		
		0.5hr	Write new unit tests for new methods for CPL multiple file functionality	Ashwin	x		
Acceptance Criteria	Multiple .csv input files for CPL election being read correctly at the same time	0.1hr	Run new unit tests for new methods written	Ashwin	x		
Definition of Done	No compilation error; unit tests for each method and agreed amount of system tests pass; correct output	0.5hr	Write integration tests for CPL multiple files	Leo	x		
Effort	Small (~2-3 hours)	0.1hr	Run Integration tests to make sure system still functions correctly	Leo	x		
		0.3hr	Write test logs for unit and integration tests	Leo	x		
		0.5hr	Write Doxygen documentation for new methods written	Ashwin	x		
PBI #5		**PBI #5 - Multiple files for the OPL algorithm**	**PBI time: 3.5hr**	**Ashwin, Leo**			
As	an election official	0.25hr	Change CLI functionality to take in multiple files for OPL	Ashwin	x		
I want	Multiple files to be brought in for an OPL election	0.25hr	Change GUI functionality to take in multiple files for OPL	Ashwin	x		
So that	they can bring in different files from different balloting locations	1hr	Code functionality for multiple files read	Leo	x		
		0.5hr	Write new unit tests for new methods for OPL multiple file functionality	Leo	x		
Acceptance Criteria	Multiple .csv input files for OPL election being read correctly at the same time	0.1hr	Run new unit tests for new methods written	Leo	x		
Definition of Done	No compilation error; unit tests for each method and agreed amount of system tests pass; correct output	0.5hr	Write integration tests for OPL multiple files	Leo	x		
Effort	Small (~2-3 hours)	0.1hr	Run Integration tests to make sure system still functions correctly	Leo	x		
		0.3hr	Write test logs for unit and integration tests	Ashwin	x		
		0.5hr	Write Doxygen documentation for new methods written	Leo	x		
PBI #6		**PBI #6 - MPO files in general**	**PBI time: 3hr**	**Janani, Leo**			
As	an election official	0.5hr	RawData can read MPO file	Janani	x		
I want	MPO election ballots to be brought in via a .csv file	0.5hr	Fileops can read MPO file	Janani	x		
So that	the election can be run by the MPO algorithm in the system	0.5hr	Write unit tests for added functionality	Janani	x		
		0.1hr	Run unit tests	Janani	x		
Acceptance Criteria	.csv input file for MPO election being read correctly	0.5hr	Write integration tests to make sure the system still works as intended	Leo	x		

Field	Value	Time	Task	Person	C1	C2	C3
Definition of Done	No compilation error; unit tests for each method and agreed amount of system tests pass; correct output	0.1hr	Run integration tests	Leo	x		
Effort	Small (~2-3 hours)	0.15hr	Write unit test logs	Leo	x		
		0.15hr	Write system test logs	Leo	x		
		0.5hr	Write Doxygen documentation for new methods written	Leo	x		
PBI #7		**PBI #7 - MPO multiple files**	**PBI time: 2.7hr**	**Alex, Ashwin, Leo**			
As	an election official	0.1hr	Change CLI functionality to take in multiple files for MPO	Alex	x		
I want	Multiple files to be brought in for a MPO election	0.1hr	Change GUI functionality to take in multiple files for MPO	Alex	x		
So that	they can bring in different files from different balloting locations	0.5hr	Code functionality for multiple files read	Leo	x		
		0.5hr	Write new unit tests for new methods for MPO multiple file functionality	Ashwin	x		
Acceptance Criteria	Multiple .csv input files for MPO election being read correctly at the same time	0.1hr	Run new unit tests for new methods written	Ashwin	x		
Definition of Done	No compilation error; unit tests for each method and agreed amount of system tests pass; correct output	0.5hr	Write integration tests for MPO multiple files	Ashwin	x		
Effort	Small (~2-3 hours)	0.1hr	Run Integration tests to make sure system still functions correctly	Ashwin	x		
		0.3hr	Write test logs for unit and integration tests	Leo	x		
		0.5hr	Write Doxygen documentation for new methods written	Leo	x		
PBI #8		**PBI #8 - MPO election**	**PBI time: 4.5hr**	**Alex, Leo, Ashwin**		X	
As	an election official	1hr	Break RawData::ParseFile() into sub functions	Alex			X
I want	to write an algorithm that determines multiple winners based on the candidates receiving the most ballots with a fair coin toss	0.5hr	Change header line read order based on election type	Alex			X
So that	an MPO election can be run by the voting system	1hr	Add new functionality	Leo			
		0.5hr	Write unit tests for added functionality	Leo			
Acceptance Criteria	MPO algorithm correctly calculates the winners and losers and fairly determines ties if there are any	0.1hr	Run unit tests	Leo			
Definition of Done	No compilation error; unit tests for each method and agreed amount of system tests pass; correct and fair output	0.5hr	Write integration tests to make sure the system still works as intended	Leo			
Effort	Large (~6-7 hours)	0.1hr	Run integration tests	Leo			
		0.15hr	Write unit test logs	Ashwin			
		0.15hr	Write system test logs	Ashwin			
		0.5hr	Write Doxygen documentation for new methods written	Ashwin			
PBI #9		**PBI #9 - MV files in general**	**PBI time: 3hr**	**Ashwin, Janani**			
As	an election official	0.5hr	RawData can read MV file	Ashwin	x		
I want	MV election ballots to be brought in via a .csv file	0.5hr	Fileops can read MV file	Ashwin	x		
So that	the election can be run by the MV algorithm in the system	0.5hr	Write unit tests for added functionality	Ashwin	x		
		0.1hr	Run unit tests	Ashwin	x		
Acceptance Criteria	.csv input file for MV election being read correctly	0.5hr	Write integration tests to make sure the system still works as intended	Janani	x		
Definition of Done	No compilation error; unit tests for each method and agreed amount of system tests pass; correct output	0.1hr	Run integration tests	Janani	x		
Effort	Small (~2-3 hours)	0.15hr	Write unit test logs	Janani	x		
		0.15hr	Write system test logs	Janani	x		
		0.5hr	Write Doxygen documentation for new methods written	Ashwin	x		
PBI #10		**PBI #10 - MV multiple files**	**PBI time: 2.7hr**	**Alex, Leo**	X		
As	an election official	0.1hr	Change CLI functionality to take in multiple files for MV	Alex	x		
I want	Multiple files to be brought in for an MV election	0.1hr	Change GUI functionality to take in multiple files for MV	Alex	x		
So that	Different files can be brought in from different balloting locations	0.5hr	Code functionality for multiple files read	Leo	x		
		0.5hr	Write new unit tests for new methods for MV multiple file functionality	Leo	x		
Acceptance Criteria	Multiple .csv input files for MV election being read correctly at the same time	0.1hr	Run new unit tests for new methods written	Leo	x		
Definition of Done	No compilation error; unit tests for each method and agreed amount of system tests pass; correct output	0.5hr	Write integration tests for MV multiple files	Leo	x		
Effort	Small (~2-3 hours)	0.1hr	Run Integration tests to make sure system still functions correctly	Leo	x		
		0.3hr	Write test logs for unit and integration tests	Leo	x		
		0.5hr	Write Doxygen documentation for new methods written	Leo	x		
			Total time: 37hr				